

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C07K 14/195, C07H 21/04, A61K 39/02, A61P 1/00	A1	(11) International Publication Number: WO 00/69904 (43) International Publication Date: 23 November 2000 (23.11.00)
(21) International Application Number: PCT/AU00/00437 (22) International Filing Date: 11 May 2000 (11.05.00) (30) Priority Data: 60/133,973 13 May 1999 (13.05.99) US (71) Applicants (for all designated States except US): PFIZER PRODUCTS INC [US/US]; Eastern Point Road, Groton, CT 06340 (US). AGRICULTURE VICTORIA SERVICES PTY LTD [AU/AU]; 475 Mickleham Road, Attwood, VIC 3049 (AU). PIG RESEARCH AND DEVELOPMENT CORPORATION [AU/AU]; 3rd Floor, Industry House, 10 National Circuit, Barton, ACT 2600 (AU). (72) Inventors; and (75) Inventors/Applicants (for US only): PANACCIO, Michael [AU/AU]; 112 Hill Road, North Balwyn, VIC 3104 (AU). ROSEY, Everett, Lee [US/US]; 457 Route 164, Preston, CT 06365 (US). SINISTAJ, Meri [AU/AU]; 3/60 Gourlay Street, East St. Kilda, VIC 3183 (AU). HASSE, Detlef [AU/AU]; 4 Scullin Court, Sunbury, VIC 3429 (AU). PARSONS, Jim [AU/AU]; 11 Kanandah Court, Research, VIC 3095 (AU). ANKENBAUER, Robert, Gerard [US/US]; 104 Castle Hill Road, Pawcatuck, CT 06379 (US).		(74) Agents: OLIVE, Mark, R. et al.; Davies Collison Cave, 1 Little Collins Street, Melbourne, VIC 3000 (AU). (81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW. ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: LAWSONIA DERIVED GENE AND RELATED FlgE POLYPEPTIDES, PEPTIDES AND PROTEINS AND THEIR USES		
(57) Abstract <p>The present invention relates generally to therapeutic compositions for the treatment and/or prophylaxis of intestinal disease conditions in animals and birds caused or exacerbated by <i>Lawsonia intracellularis</i> or similar or otherwise related microorganism. In particular, the present invention provides a novel gene derived from <i>Lawsonia intracellularis</i> which encodes an immunogenic FlgE peptide, polypeptide or protein that is particularly useful as an antigen in vaccine preparation for conferring humoral immunity against <i>Lawsonia intracellularis</i> and related pathogens in animal hosts. The present invention is also directed to methods for the treatment and/or prophylaxis of such intestinal disease conditions and to diagnostic agents and procedures for detecting <i>Lawsonia intracellularis</i> or similar or otherwise related microorganisms.</p>		